

COMMERCIAL BUILDING ENERGY ASSET RATING Pilot Project Training Session

3:00PM ET / 12:00 PM PT
May 17, 2012

11:00AM ET / 8:00 AM PT
May 18, 2012

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Introduction

- You should have received:
 - Energy Asset Rating Fact Sheet
 - Pilot Program Overview
 - Data Collection Form

Latest versions can be found at <https://assetrating.labworks.org/>
until the new energy asset rating website is released.

- Energy Asset Rating website
http://www1.eere.energy.gov/buildings/commercial_initiative/asset_rating.html
- Pilot information webinar and FAQ about the pilot program
http://www1.eere.energy.gov/buildings/alliances/webinar_archives.html#arpiot_20120312
- Energy Asset Rating Tool and User Guide
<https://assetrating.labworks.org/>



DOE Commercial Building Energy Asset Rating Program
Call for Pilot Participants

When to have early access to the free energy asset rating tool? When to receive energy efficiency recommendations tailored to your building? When to be one of the first to receive an energy asset rating? The U.S. Department of Energy (DOE) is now recruiting for the commercial building energy asset rating pilot program. The pilot will begin in spring 2012, and we are looking for commercial building owners, managers, or operators willing to assist. Your feedback is important to our success. Participants will receive an energy asset rating tool and list of corrective energy recommendations for each building they enter. Technical support will be provided throughout the process.

Who Can Participate?
Commercial building owners, facility managers, building engineers, energy auditors, and energy consultants all are invited to participate. State governments, municipalities, and utilities also are welcome to discuss potential involvement.

What Are the Qualifiers for Participation?
The mission of the program is to understand and be included in the market for:

- Building types: office
- Ownership type: both
- "Vintage": any
- Climate zone: any

How Do I Get Involved?
Information webinars were posted on CH2A's website presentation PDF in general participating, please contact:

DOE Commercial Building Energy Asset Rating Pilot Project
Data Collection Form
Version: 04/27/2012

This data collection form is an energy audit checklist for collecting required information for energy asset rating. This form can be used to assist your onsite walk-through. It will also be used to collect your feedback on the data collection process (see the example below). Please complete the required section and return to us at asset_rating@ee.doe.gov after your data collection and input.

Facility Name:	
Date:	
Data collected by:	
Project role:	

EXAMPLE

Indicate Difficulty and Confidence	Date Entry No.	Required Data	Enter Your Data
Building Information			
1	Facility type	<input type="checkbox"/> Office <input type="checkbox"/> Retail <input type="checkbox"/> Education <input type="checkbox"/> Warehouse, non-refrigerated	

Only this section needs to be completed and returned to us at assetrating@ee.doe.gov.

For each data entry, please indicate the difficulty level of data collection and the confidence in the data collected by circling the following:

Example Difficulty Level	1 = Easy (immediately obtained through a quick walk-through)
<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3	2 = Medium (need to look for archived documents)
	3 = Difficult (need to measure using professional equipment)

Example Confidence Level	L = Low (value noted is based solely on educated guess, any physical or documentary evidence available is weak or inconclusive)
<input type="radio"/> L <input type="radio"/> M <input type="radio"/> H	M = Moderate (value noted is based on either physical or documentary evidence)
	H = High (value noted is based on multiple pieces of physical and/or documentary evidence)

Participant Actions

- ☒ Provide point of contact, building information, and identify level of involvement
- ☒ Receive pilot project starter kit (program overview, data collection sheet)
- ☐ Participate in a training webinar **[Today]**
- ☐ Complete the pre-rating online questionnaire (4 questions) **[Next week]**
- ☐ Receive your user account for the energy asset rating tool
- ☐ Collect data and enter into the energy asset rating tool
- ☐ Submit feedback on data collection (See data collection form)
- ☐ Provide energy model and/or utility bills (for Partner only)
- ☐ Complete post-rating online questionnaire (21 questions)

**You can
proceed before
receiving the
user account**

Pre-rating Questionnaire

- You will receive an email with a unique link
 - 4 questions
 - Prepopulated building names
- Complete the questionnaire BEFORE you start the data collection and BEFORE you use the tool.

Energy Asset Rating Pilot Project TEST

Pre-Rating Questions

This brief survey should be completed before you conduct building Energy Asset Rating. The purpose of these questions is to compare your impressions of building efficiency to your actual findings.

If you have questions or need help with the survey or with your energy asset rating please contact the [energy asset rating project team](#).

1. How do you currently compare or track the energy use of your building(s)? (Choose all that apply.)

- ☐ Using my company's internal documentation like spreadsheets
- ☒ Using ENERGY STAR Portfolio Manager
- ☐ Using green building certification system like LEED, Green Globes, etc.
- ☐ Using other free tool (please specify)
- ☐ Using a paid service/tool (please specify)
- ☐ Not currently comparing or tracking energy efficiency

Next



Questions? Contact the [energy asset rating project team](#).

- Use Data Collection Form during your site walkthrough
- Indicate difficulty and confidence levels for each data entry
- Return the completed data collection form to asset.rating@pnnl.gov

EXAMPLE

Indicate Difficulty and Confidence	Data Entry No.	Required Data	Enter Your Data						
Building Information									
<div style="border: 2px solid red; border-radius: 50%; padding: 5px; display: inline-block;"> <table border="1"> <tr> <td>1 <input checked="" type="checkbox"/></td> <td>2 <input type="checkbox"/></td> <td>3 <input type="checkbox"/></td> </tr> <tr> <td>L <input type="checkbox"/></td> <td>M <input type="checkbox"/></td> <td>H <input checked="" type="checkbox"/></td> </tr> </table> </div>	1 <input checked="" type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	L <input type="checkbox"/>	M <input type="checkbox"/>	H <input checked="" type="checkbox"/>	1	Facility type	<input type="checkbox"/> Office <input type="checkbox"/> Retail <input type="checkbox"/> Education <input type="checkbox"/> Warehouse, non-refrigerated
1 <input checked="" type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>							
L <input type="checkbox"/>	M <input type="checkbox"/>	H <input checked="" type="checkbox"/>							



Only this section needs to be completed and returned to us at asset.rating@pnnl.gov.

For each data entry, please indicate the difficulty level of data collection and the confidence in the data collected by circling the following:

Example Difficulty Level <table border="1"> <tr> <td>1 <input type="checkbox"/></td> <td>2 <input type="checkbox"/></td> <td>3 <input type="checkbox"/></td> </tr> </table>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	1 = Easy (immediately obtained through a quick walk-through) 2 = Medium (need to look for archived documents) 3 = Difficult (need to measure using professional equipment)
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>		
Example Confidence Level <table border="1"> <tr> <td>L <input type="checkbox"/></td> <td>M <input type="checkbox"/></td> <td>H <input type="checkbox"/></td> </tr> </table>	L <input type="checkbox"/>	M <input type="checkbox"/>	H <input type="checkbox"/>	L = Low (value noted is based solely on educated guess, any physical or documentary evidence available is weak or inconclusive) M = Moderate (value noted is based on either physical or documentary evidence) H = High (value noted is based on multiple pieces of physical and/or documentary evidence)
L <input type="checkbox"/>	M <input type="checkbox"/>	H <input type="checkbox"/>		

Data Collection

Envelope, Roof			
<div>1</div> <div>2</div> <div>3</div> <div>L</div> <div>M</div> <div>H</div>	12*	Roof type	<input type="checkbox"/> Metal surfacing <input type="checkbox"/> Shingles/shakes <input type="checkbox"/> Built-up/EPDM with m <input type="checkbox"/> Built-up/EPDM with co <input type="checkbox"/> Built-up/EPDM with wood deck
		Answer 13, 14, or 15	
<div>1</div> <div>2</div> <div>3</div> <div>L</div> <div>M</div> <div>H</div>	13	Roof R-value	<input type="text"/> °F•ft ² •h/Btu
<div>1</div> <div>2</div> <div>3</div> <div>L</div> <div>M</div> <div>H</div>	14	Roof insulation thickness	<input type="text"/> in
<div>1</div> <div>2</div> <div>3</div> <div>L</div> <div>M</div> <div>H</div>	15	Roof U-value	<input type="text"/> Btu/°F•ft ² •h

Asterisk (*) indicates the minimum required data. More data will increase the accuracy of the energy model results.

You only need to enter one of the three data fields.

Some data requirements may or may not be applicable to your building.

If "Boiler" is selected in 71, answer 72 and 73

<div>1</div> <div>2</div> <div>3</div> <div>L</div> <div>M</div> <div>H</div>	72*	Distribution type	<input type="checkbox"/> Air-handling unit <input type="checkbox"/> Fan coil <input type="checkbox"/> Single-zone AHU <input type="checkbox"/> Multi-zone AHU
<div>1</div> <div>2</div> <div>3</div> <div>L</div> <div>M</div> <div>H</div>	73	Draft type	<input type="checkbox"/> Mechanical <input type="checkbox"/> Other draft

Energy Asset Rating Tool

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

<https://assetrating.labworks.org/>

Download User Guide
and Sample Report

Receive your login ID
(your email) and
password in email

Download program
information and
training materials

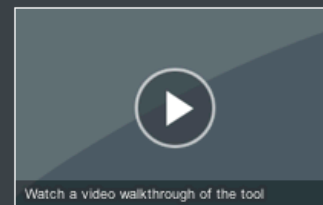
COMMERCIAL BUILDING Energy Asset Rating

U.S. DEPARTMENT OF
ENERGY | Energy Efficiency &
Renewable Energy

Gain Insight Into Your Building Energy Asset

Commercial building energy asset rating is a national standard for a voluntary energy rating system evaluating the physical characteristics of your building as built and its overall energy efficiency independent of occupancy and operational choices.

This asset rating tool will guide your data collection, store your building information, and generate asset rating and system evaluations for your building envelope, the mechanical and electrical systems. The asset rating tool will also identify the cost-effective upgrade opportunities and help you gain insight into the energy efficiency potential of your building.



To learn more about how the tool works read the [User's Guide](#). You can also download a [sample report](#).

Log In

Log In

[Forgot your password?](#)

Pilot Program Information

Thank you for participating the energy asset rating program! Below is the pilot participant starter kit:

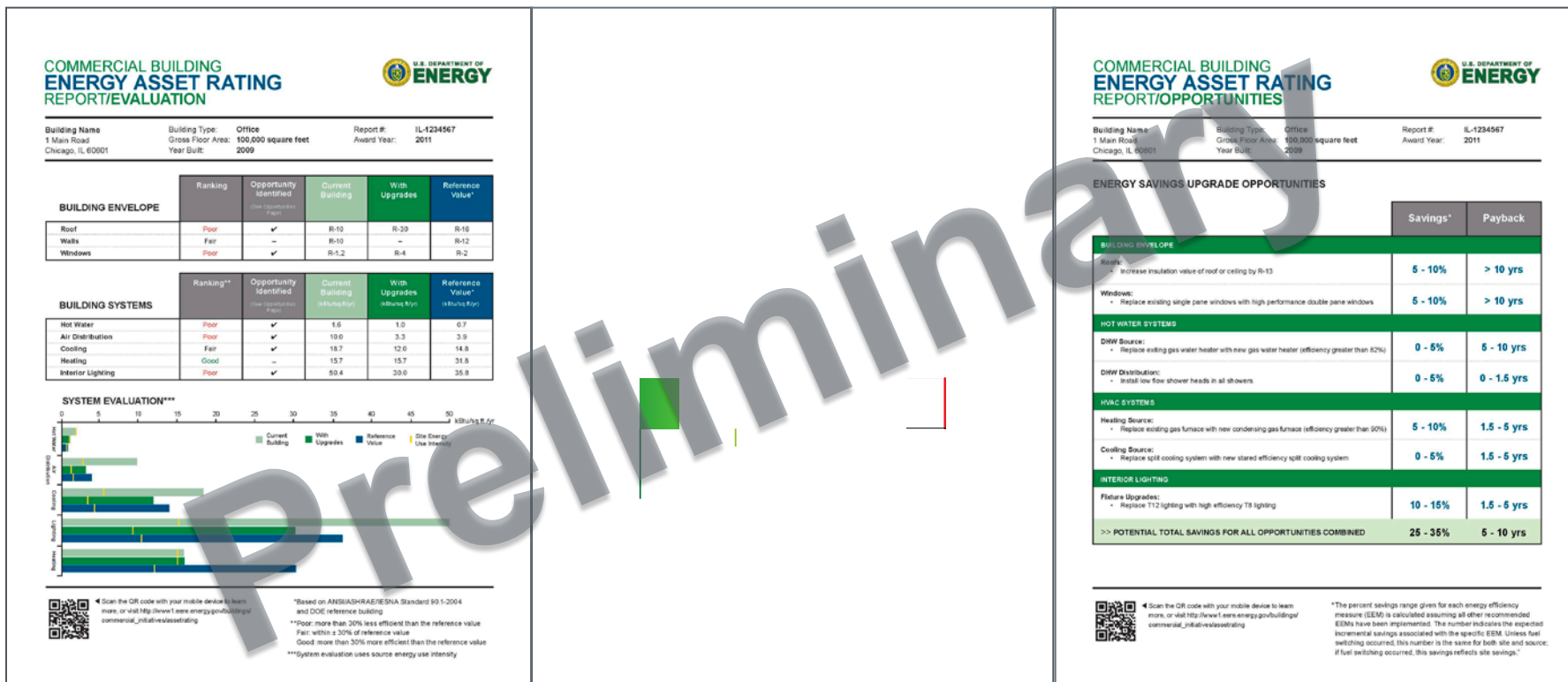
- [Pilot building information form](#) - Please complete and return to us at asset_rating@ees.doe.gov
- [Participant checklist](#) - Outlines the expected timeline and participant activities.
- [Data collection form](#) - The list of data to be collected to receive an energy asset rating. This form can be used during your site walk-through and will include all data necessary for input into the energy asset rating tool. This form also includes an area for feedback on data collection. Instructions will be given during our training session.
- [Pilot program overview](#) - Provides program descriptions, how to participate, participant expectations, and frequently asked questions.
- [Pilot program brochure](#) - Please feel free to share with other interested parties.

For more information, please visit our website at <http://www.commercialbuildings.energy.gov/assetrating.html>.

To receive a pilot user account, please [contact us](#) with "Request Account" in the subject line.

Energy Asset Rating Report

- Receive an email notification when your report is ready.
- **All reports received during the pilot period is preliminary.**
- The modeled results might be changed when the tool is revised during the pilot stage.



Post-rating Questionnaire

- You will receive an email with a unique link
 - 21 questions
 - Prepopulated building names
- Complete the questionnaire **AFTER** you receive your rating report.



Energy Asset Post-Rating Survey

Staff Qualifications

1. What are your qualifications and experience with building energy systems? (Choose all that apply.)

- ☐ Certified Energy Auditor or Assessor (specify certification and date received)
- ☐ Building owner with experience in design and operations (specify years of ownership/experience)
- ☐ Professional Engineer (P.E.)
- ☐ Registered Architect (R.A.)
- ☐ Energy auditing, energy management, facility management experience or other experience related to energy management (describe experience)
- ☐ Other (please describe)

2. Which best describes your approach to completing the data energy collection sheet? (Choose all that apply.)

- ☐ One person gathered data and relied on various written resources (e.g., equipment documentation, design plans, etc.)
- ☐ One person led data gathering effort with help from building personnel or consultants with expertise in different areas.
- ☐ Team members with different roles and expertise completed data energy collection sheet.
- ☐ Other (please describe)

3. Which best describes your data verification process? (Choose all that apply.)

- ☐ One person gathered and input data that was NOT verified by another party.
- ☐ One person gathered and input data that was verified by another party.
- ☐ One person led a data gathering effort and the data was NOT verified by another party.
- ☐ One person led a data gathering effort and the data was verified by another party.
- ☐ Team members with different roles and expertise completed the data energy collection sheet and team members verified each other's data.
- ☐ Other (briefly describe)

Two Levels of Participation

Energy Asset Rating Partner / Associate

Qualification			Partner (3 options)			Associate
1	Data collection	A building	x	x	x	x
2	Model accuracy	Existing audit report/model	x		x	
3	Rating relevance	ENERGY STAR Portfolio Manager experience		x	x	

Partners need to provide:

ENERGY STAR rating and 12 months utility information
OR existing energy audit report and energy model
OR Both

Complete the additional building information form and return to
asset.rating@ee.doe.gov

To share your energy audit/model result

Existing Audit Report and Energy Model

Energy audit was conducted on (date)	
Energy model was built on (date)	
Weather Data used in Simulation	
Software used to build energy model (Name and version)	
Has the energy model be calibrated? (Yes/No)	

Model Assumptions

Operating hours per week	
Temperature setpoint (F)	wint summ
Plug load (W/ft ²)	
Gas miscellaneous load (kBtu/ft ²)	
Lighting power density (W/ft ²)	
No. of occupants	
Air exchange rate	

Recommendations (List the top five retrofit recommendations from the energy audit or model.)

1.
2.
3.
4.
5.

Model Results

Modeled energy use intensity by system (kBtu/ft ²)	Heating	
	Cooling	
	Lighting	
	Ventilation	
	Service hot water	
	Miscellaneous	
	Others	

To share your ENERGY STAR rating and utility information

ENERGY STAR rating and utility information

You can find the following information from your Portfolio Manger site.

ENERGY STAR rating received year (most recent year)	
ENERGY STAR rating (1-100)	

Indicate your building's space type and complete the corresponding fields.

Space Type	
------------	--

Office Building Only

Gross Floor Area (square foot)	
Weekly operating hours (hours)	
Workers on Main Shift	
Number of PCs	
What percent of this space is air-conditioned	
What percent of this space is heated	

School Building Only

Gross Floor Area (square foot)	
Is this building normally open at all on the weekends?	
Number of PCs	
Number of walk-in refrigeration/freezer units	
Presence of cooking facilities	
Percent of the gross floor area that is cooled	
Percent of the gross floor area that is heated	

Retail Building Only

Gross Floor Area (square foot)	
Weekly operating hours	
Number of open or closed refrigeration/freezer cases	
Number of walk-in refrigeration/freezer units	
Workers on Main Shift	

12 months energy use information

(Leave the column blank if the fuel type is not applicable to your building.)

	Electricity Use	Electricity Peak	Gas Use	District Steam	Other Fuel Use
	(kWh)	(kW)	(therm)	(1000 lbs)	(kBtu)
Jan					
Feb					
Mar					
Apr					
May					
Jun					
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					
Annual					

Thank you

For pilot program information

Contact Nora Wang na.wang@pnnl.gov and Robin Sullivan
robin.sullivan@pnnl.gov

For tool support

Contact Will Gorrissen at Will.Gorrissen@pnnl.gov

For DOE program information

Contact Subid Wagley Subid.Wagley@ee.doe.gov